

FIG. 1

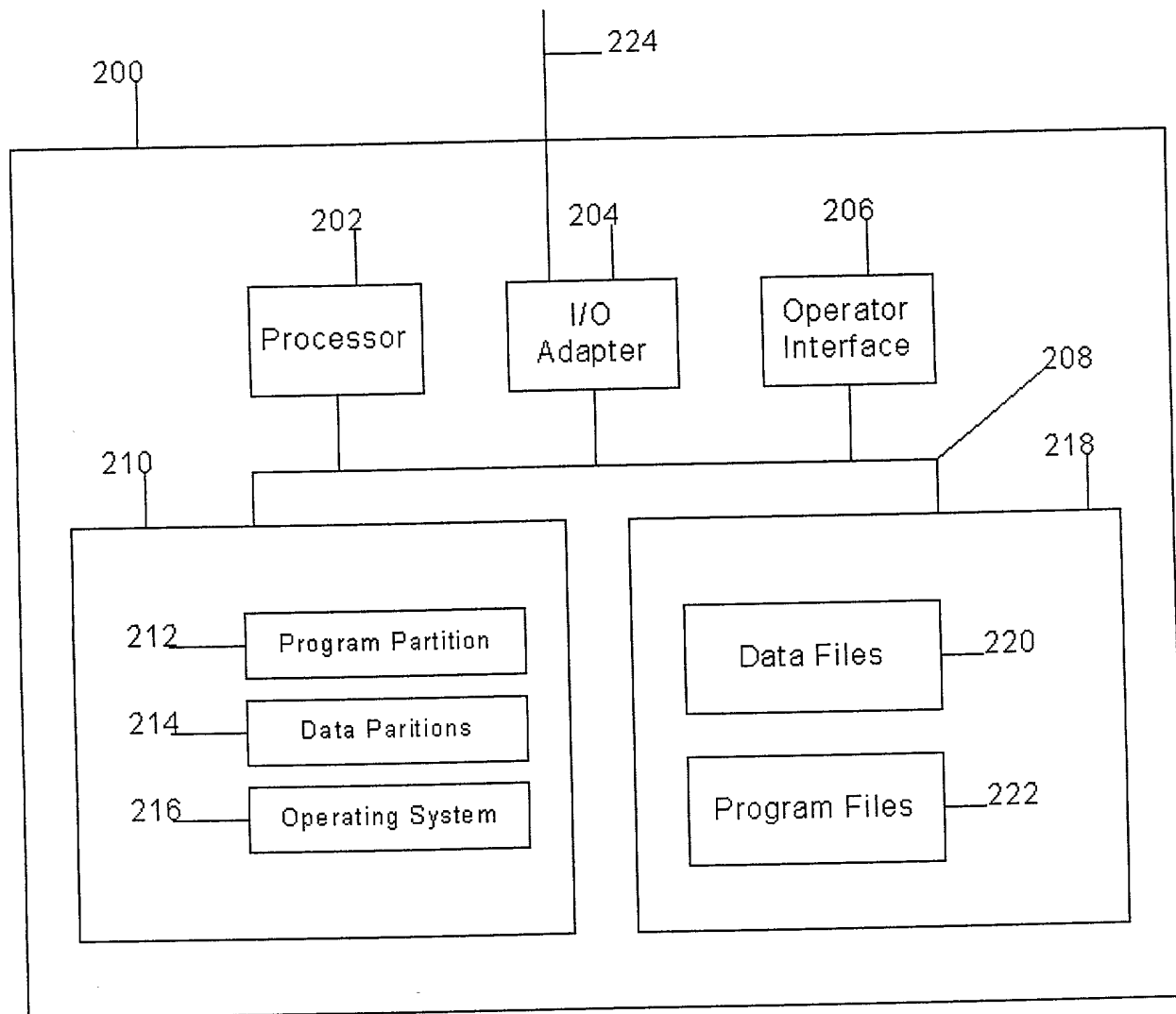


FIG. 2

General Information	
Author(s)	John Doe, Jane Smith
Title	Analysis of the Impact of Climate Change on Global Agriculture
Journal	Environmental Science and Technology
Volume	45
Issue	12
Year	2011
Pages	1234-1245
Keywords	Climate Change, Agriculture, Global Warming, Food Security
Abstract	This study examines the projected impacts of climate change on global agricultural production. Using a combination of climate models and agricultural data, the authors predict a significant decrease in crop yields for major food crops by the year 2050. The study highlights the urgent need for adaptation strategies to mitigate these impacts and ensure food security for future generations.
Introduction	The world's population is projected to reach nearly 9 billion by the year 2050, with a corresponding increase in demand for food. Simultaneously, climate change is expected to alter the global climate, potentially leading to more frequent and severe weather events, changes in precipitation patterns, and rising temperatures. These changes pose a significant threat to global agricultural production, which is the primary source of food for the world's population. This study aims to quantify the potential impacts of climate change on global agriculture and explore possible adaptation strategies.
Methodology	The study employs a multi-model approach, combining climate models (CMIP5) with agricultural models (APSIM) to simulate the impact of climate change on crop yields. The models are run under various scenarios, including different levels of greenhouse gas emissions and different adaptation strategies. The results are then compared to historical data to assess the potential changes in crop yields.
Results	The results of the study show a clear and consistent trend of decreasing crop yields across all major food crops (wheat, rice, maize, and soybeans) by the year 2050. The projected decreases range from approximately 10% to 50%, depending on the crop and the scenario. The study also finds that the impacts of climate change are more severe in regions that are already experiencing high temperatures and low precipitation, such as the Mediterranean and parts of Africa and Asia.
Conclusion	The study concludes that climate change poses a significant threat to global agricultural production and food security. The projected decreases in crop yields could lead to increased food prices, malnutrition, and even famine in some regions. Therefore, it is crucial that governments and the private sector work together to develop and implement effective adaptation strategies to mitigate the impacts of climate change on agriculture. These strategies may include improved water management, crop diversification, and the development of climate-resilient crop varieties.

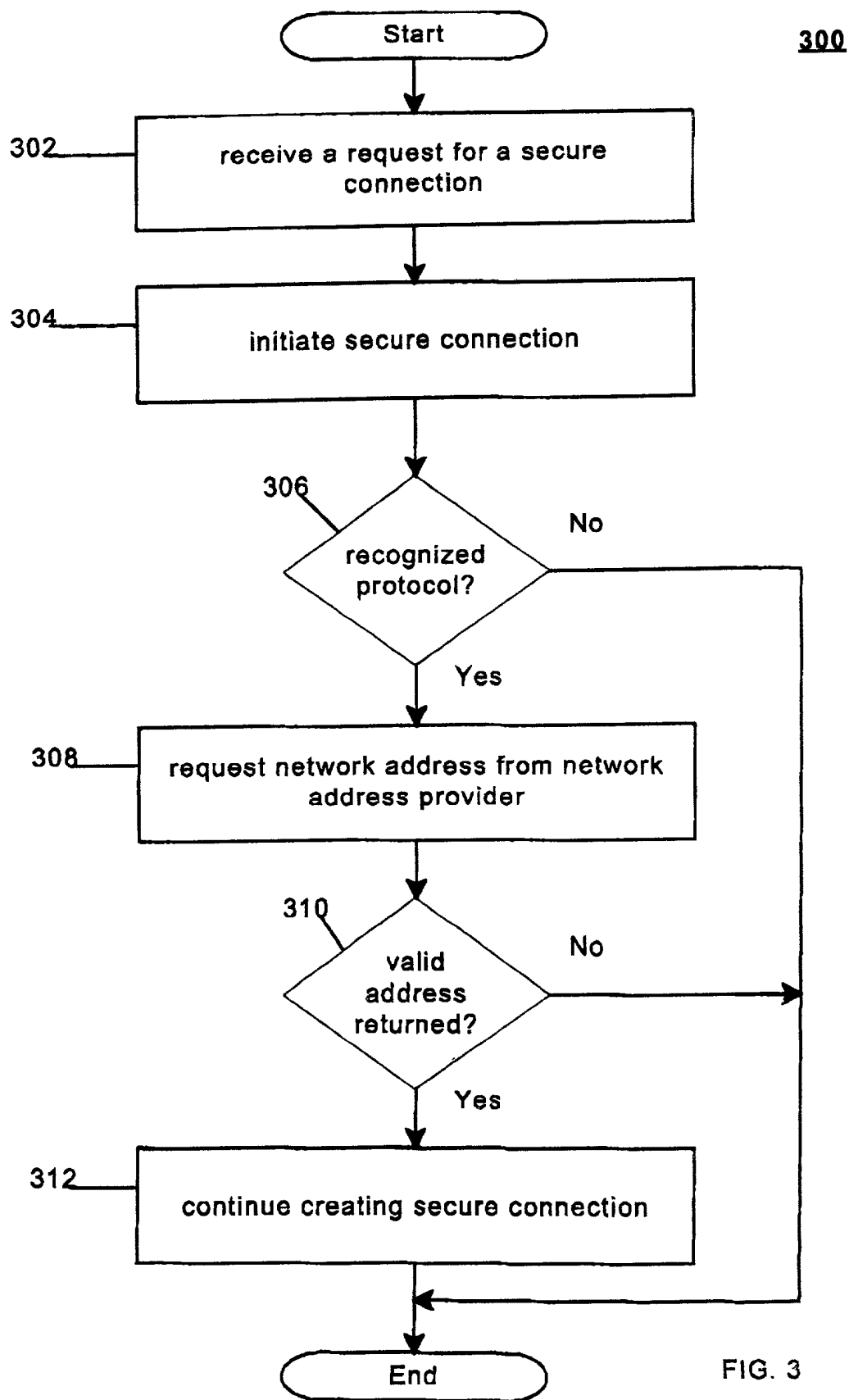


FIG. 4

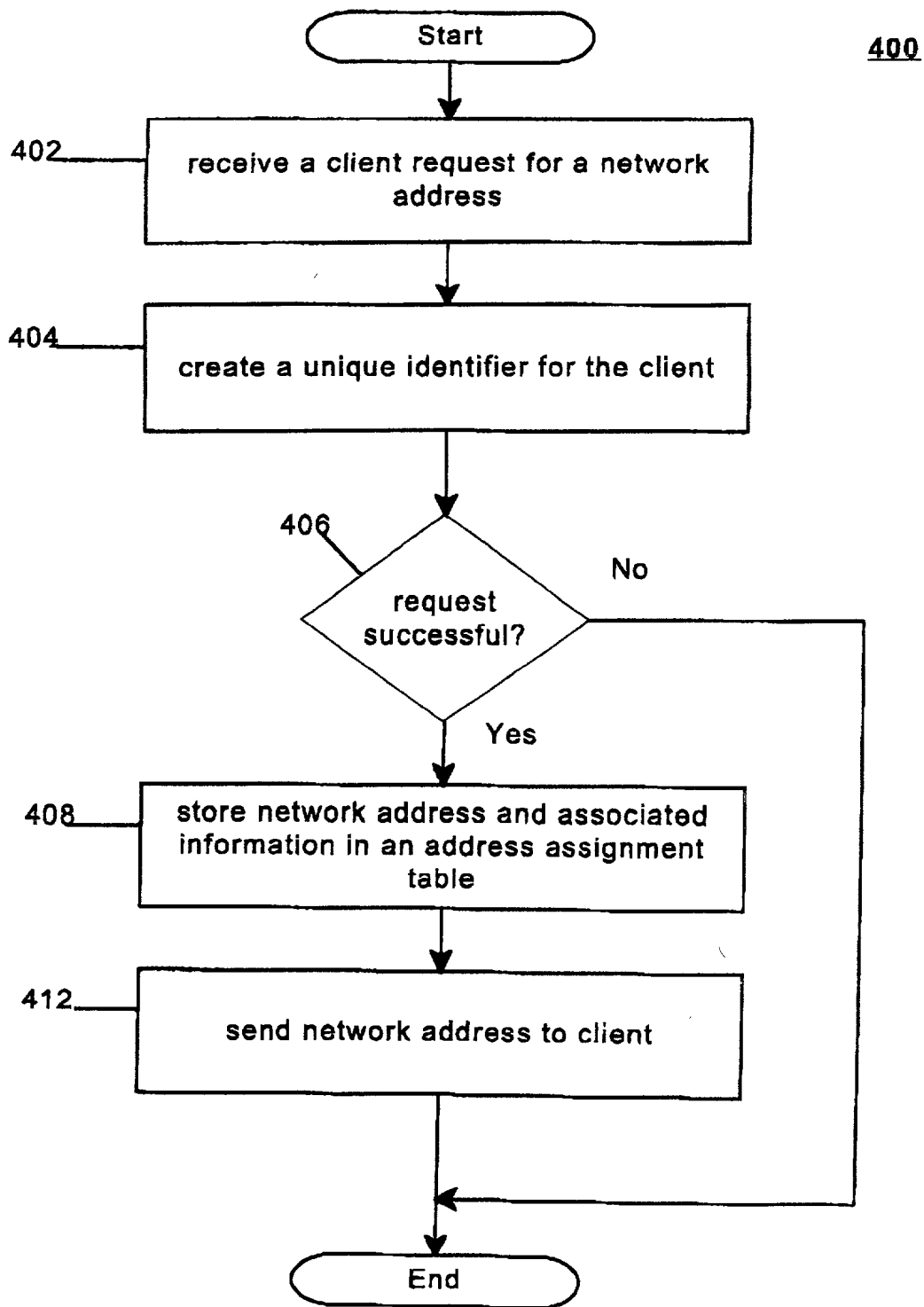


FIG. 4

FIG. 5

500

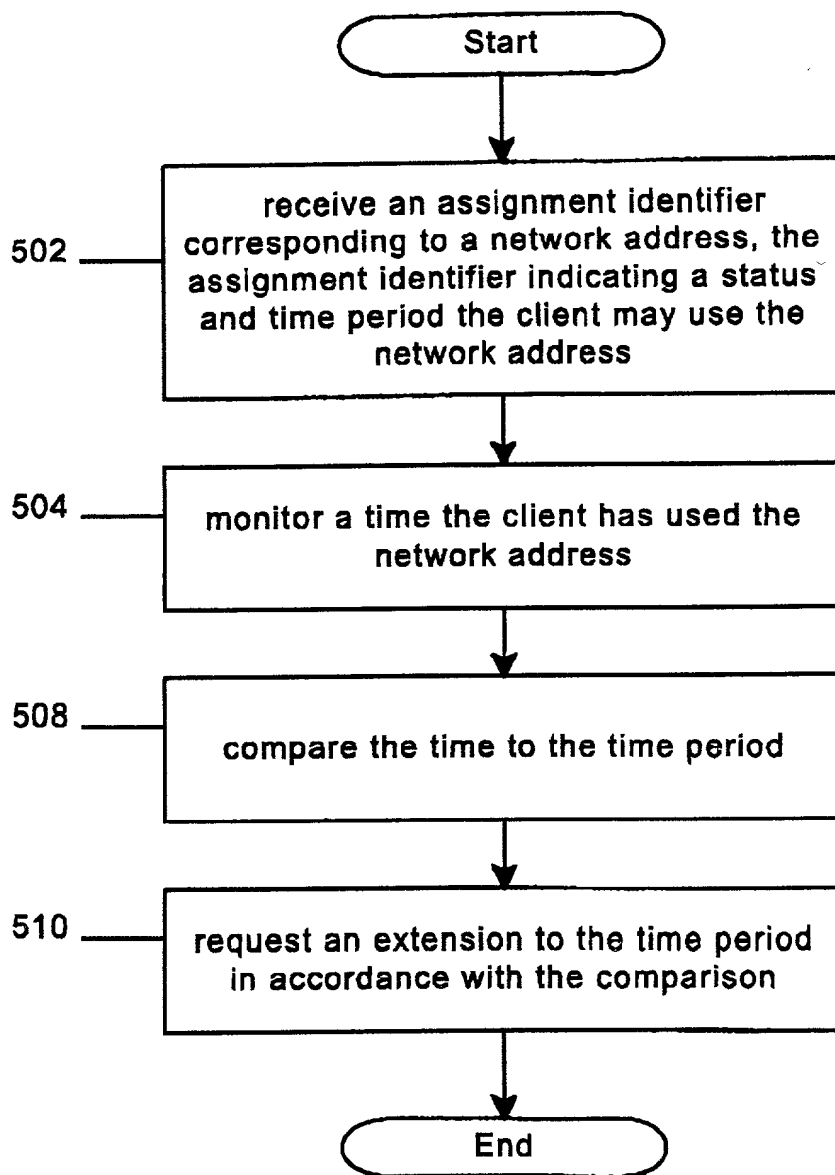


FIG. 5

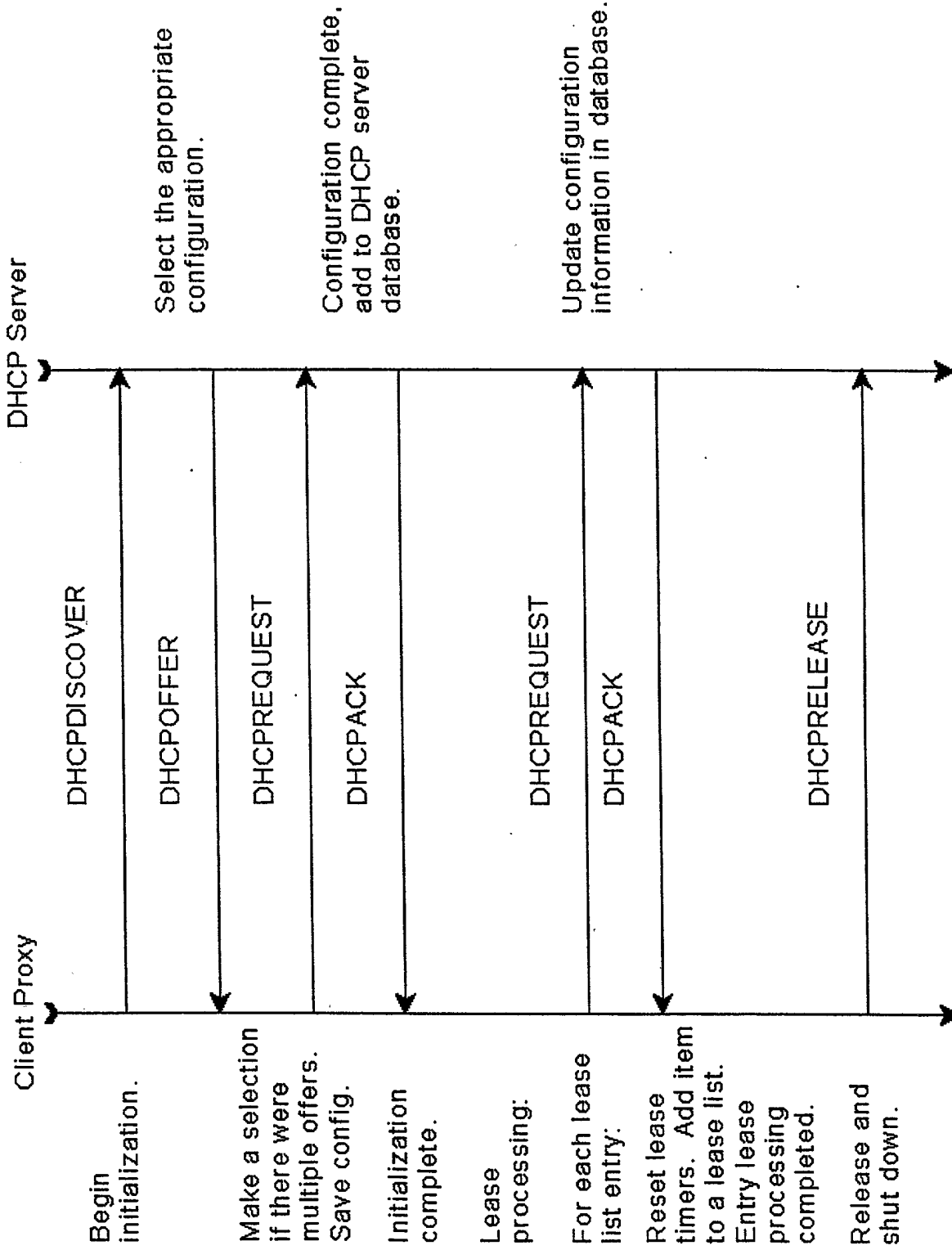


FIG. 6